Table 1
Reported mean urinary excretion as a molar percentage (% ±S.D.) of total recovered nicotine and metabolites in smokers urine

Study (number of subjects)	Study 1 (11)	Study 2 (12)	Study 3 (91)	Study 4 (12)	Study 5 (5)
Cotinine	13.2±3.9	13.3±3.1	9.2±2.6	14.8±5.9	15.2
Nicotine	10.4±3.7	10.4±4.4	9.4±5.7	7.9±4.6	9.5
trans-3′-Hydroxycotinine	35.2±7.4	39.1±12.5	36.1±10.6	42.4±12.8	34.1
Cotinine-*N*-glucuronide	17.5±6.3	15.8±7.8	14.0±5.4	12.1±6.0	20.1
Nicotine-*N*-glucuronide	2.8±2.2	4.6±2.9	4.5±2.5	2.6±2.1	3.7
trans-3′-Hydroxycotinine-*O*-glucuronide	8.5±3.8	7.8±5.9	22.8±10.0	10.3±7.6	7.4
Nicotine *N*-1′-oxide	6.8±2.9	3.7±0.9	3.0±2.1	N.D.	6.7
Cotinine *N*-1-oxide	3.9±1.9	4.5±1.5	0.9±0.9	N.D.	2.2
Nornicotine	–	0.6±0.2	–	–	–
Norcotinine	1.5±0.5	N.D.[a]	N.D.	N.D.	1.3
Others	–	–	–	10.1[b]	–
Sum	99.8	99.8	99.9	100.2	100.2

Study 1 (Byrd et al., 1992), Study 2 (Benowitz et al., 1994), Study 3 (Andersson et al., 1997), Study 4 (Hecht et al., 1999), Study 5 (Meger et al., 2002).

[a] N.D., not determined.

[b] Summation of 4-hydroxy-4-(3-pyridyl)butanoic acid and 4-oxo-4-(3-pyridyl)butanoic acid.

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